

What is claimed is:

1. An interchangeable lens camera system having a camera body, a photographing lens, and a rear converter which can be mounted between said camera body and said photographing lens, said camera body having a first group of contacts, said photographing lens having a second group of contacts, said camera body and said photographing lens communicating with each other via said first group of contacts and said second group of contacts with said first group of contacts being electrically connected with said second group of contacts, respectively, wherein said rear converter comprises:

a group of relay channels via which said first group of contacts of said camera body are electrically connected with said second group of contacts of said photographing lens, respectively, in a state where said rear converter is mounted between said camera body and said photographing lens;

a rear converter memory in which rear converter data on said rear converter is stored, said rear converter memory including at least one port electrically connected to corresponding at least one relay channel of said group of relay channels; and

a rear converter controller which controls a reading operation of said rear converter data from said rear

converter memory, said rear converter controller including at least one port electrically connected to corresponding at least one relay channel of said group of relay channels;

5        wherein said rear converter memory and said rear converter controller have a function to send said rear converter data to said camera body while said camera body and said photographing lens communicate with each other via said first group of contacts, said second group of  
10 contacts, and said group of relay channels.

2.    The interchangeable lens camera system according to claim 1, wherein said photographing lens comprises a lens memory in which photographing lens data is stored;

15        wherein said camera body comprises a body controller which communicates with said lens memory to read said photographing lens data from said lens memory;

      wherein a portion of said photographing lens data serves as dummy data for said rear converter; and

20        wherein said rear converter data is read out of said rear converter memory to be transmitted to said body controller in synchronization with an operation of said body controller in which said body controller receives said dummy data.

25        3.    The interchangeable lens camera system

according to claim 1, wherein said body controller is electrically connected to said rear converter controller via a first communication/control contact of each of said first group of contacts and said second group of contacts, and a data I/O contact of each of said first group of contacts and said second group of contacts;

wherein said photographing lens includes a lens controller which communicates with said body controller; and

wherein said body controller is electrically connected to said lens controller via said first communication/control contact, a second communication/control contact of each of said first group of contacts and said second group of contacts, and at least one relay channel of said group of relay channels, wherein a handshake operation is performed between said body controller and said lens controller via said second communication/control contact.

4. The interchangeable lens camera system according to claim 3, wherein said lens controller sends out dummy data to enable said data I/O contact if inputting a command for said rear converter, which is issued by said body controller, via said data I/O contact, while said lens controller communicates with said body controller; and

wherein said rear converter sends out said rear converter data to said data I/O contact in the case where said command is input via said data I/O contact.

5        5.        The interchangeable lens camera system according to claim 4, wherein said rear converter receives said dummy data from said lens controller in the case where said lens controller receives said command; and

10        wherein said rear converter sends said rear converter data to said body controller in synchronization with an operation of said body controller in which said body controller receives said dummy data.

15        6.        The interchangeable lens camera system according to claim 2, wherein said body controller is set to recognize one of a last one byte and a last few types of said photographing lens data as said dummy data for said rear converter.

20        7.        A rear converter which can be mounted between a camera body and a photographing lens of an interchangeable lens camera system, said camera body having a first group of contacts, said photographing lens having a second group of contacts, said camera body and said photographing lens communicating with each other via said first group of contacts and said second group of contacts with said first group of contacts being  
25        electrically connected to said second group of contacts,

respectively, wherein said rear converter comprises:

1 a group of relay channels via which said first group  
of contacts of said camera body are electrically connected  
with said second group of contacts of said photographing  
5 lens, respectively, in a state where said rear converter  
is mounted between said camera body and said photographing  
lens;

10 a rear converter memory in which rear converter data  
is stored, said rear converter memory including ports  
electrically connected to at least one relay channel of  
said group of relay channels; and

15 a rear converter controller which controls a reading  
operation of said rear converter data from said rear  
converter memory, said rear converter controller  
including ports electrically connected to at least one  
relay channel of said group of relay channels;

20 wherein said rear converter memory and said rear  
converter controller have a function to send said rear  
converter data to said camera body while said camera body  
and said photographing lens communicate with each other  
via said first group of contacts, said second group of  
contacts, and said group of relay channels.

25 8. The rear converter according to claim 7,  
wherein each of said first group of contacts and said  
second group of contacts comprises:

a first communication/control contact via which  
said body controller sends a control signal to said lens  
controller;

a second communication/control contact via which  
5 said lens controller sends a control signal to said body  
controller; and

a data I/O contact for data communication;

wherein said first communication/control contact,  
said second communication/control contact, and said data  
10 I/O contact of said first group of contacts are  
electrically connected to said first  
communication/control contact, said second  
communication/control contact and said data I/O contact  
of said second group of contacts, respectively, via said  
15 group of relay channels;

wherein said rear converter memory and said rear  
converter controller are electrically connected to relay  
channels of said group of relay channels which correspond  
to said first communication/control contact and said  
20 data I/O contact; and

wherein said rear converter memory and said rear  
converter controller have a function to send said rear  
converter data to said camera body after a commencement  
of a handshake operation between said body controller and  
25 said lens controller via said second

communication/control contact in the case where said camera body commands said rear converter controller to send said rear converter data via said data I/O contact.

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